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THE

PHYTOLOGIST.

A BOTANICAL JOURNAL.

Ὡς ἐμεγαλύνθη τὰ ἔργα σου, Κύριε!—*πάντα ἐν σοφίᾳ ἐποίησας.*

ΨΑΛΜ. *ργ΄.* 24.

Benedicite universa germinantia in terra Domino; laudate et superexaltate EUM in secula.—*Hymn. iii Pueror. v.* 76.

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VISIT TO LONGSLEADALE.

By JOHN WINDSOR.

In early life, now a long time ago, when a medical pupil in my native town, Settle, Yorkshire, I was accompanied by my late friend the Rev. John Howson, of Giggleswick, in a botanical excursion of a few days, to the neighbourhood of Kendal.

One of those days was occupied by a visit to Longsleadale, a spot celebrated as producing at one time, along with other interesting plants, that beautiful grass, the *Stipa pennata*. The excellent Ray says of it, "Found by Dr. Richardson in company with Thomas Lawson, on the limestone rocks hanging over a little valley (I should rather call it a long one) called Longsleadale, about six miles north of Kendal, in Westmoreland."

I am not aware that this plant has been found in this locality at any recent period, and on the only two occasions when I have visited it I have looked for it in vain. My explorations however have been confined to the lower part and the sides of the valley, not extending to the top of the mountains above, and therefore I could not say but that possibly it might yet be found by some more successful searcher; indeed, if I remember rightly, there was a notice by some one in a volume of the 'Phytologist,' that it was still to be found at no great distance from Longsleadale, although for obvious reasons it was thought prudent not to designate the exact locality.

On the 11th of June of this year, 1862, accompanied by my youngest son, I left Manchester in the afternoon for Kendal. A little before six o'clock the following morning we set off for the valley, taking the great North Road for about four miles, and then turning off by a lane on the left, which conducted us about two miles further into the romantic dale. By the side of the lane, in going along, we found in tolerable abundance *Geranium sylvaticum* and *Meconopsis cambrica*, also a solitary specimen of *Anchusa sempervirens*. The weather, we all know, has this spring and summer been hitherto strikingly cold and wet: if fine wholly or partially one day, the next has generally been the reverse; and the latter happened to be our fate on this occasion, which brought us an almost constant succession of heavy stormy

BRITISH MUSEUM

showers, inducing us frequently to creep under some neighbouring rock for partial shelter.

We were however intent upon making the best of our visit, and gradually wended our way to the very top of the valley, some four or five miles in extent, pretty thoroughly exploring every inviting spot in our course on the right bank of the central stream. This stream, which on my former visit was one insignificant and nearly dried-up rivulet, was now swollen by the late frequent heavy rains into a considerable torrent, exhibiting in its rocky course frequent foaming cataracts of striking grandeur. On casting our eyes towards the almost precipitous sides of the lofty mountain above, numerous rills, looking quite white from their rough and rapid course, were seen descending into the valley we were traversing, which was thus rendered for miles a perfect swamp. Buckbarrow well, which I had seen in my former visit, was not now distinguishable, but totally merged in the general rush of waters. Of *Oxyria reniformis,* which I had formerly collected there, I could not find a single specimen. On the other hand, I met with a much greater abundance of *Alchemilla alpina* and of *Saxifraga stellaris* than on that occasion; the former being found not only in the neighbourhood of the stream, but also copiously decorating the precipitous sides of the adjacent mountain cliffs. The latter was met with by almost every rill and damp spot in our ascent of the upper part of the valley, accompanied in some places with *S. hypnoides* and also *S. aizoides,* but the last had not got into flower, nor had *Epilobium alsinifolium,* which was growing in the same places; associated with these grew *Pinguicula vulgaris* beautifully in flower. I found *Teesdalia nudicaulis* not far off in moderate quantity, but in one place only *Cryptogramma (Allosorus) crispa* abounded everywhere; and we met with a few plants of *Lycopodium Selago. Juncus sylvaticus* grew copiously in a cleft of the rocks. A *Salix* with small obovate leaves, but without fruit, perhaps *oleifolia* or a form of *cinerea,* was met with on the margin of the stream. A few Lichens were seen; I collected chiefly forms of *Rhizocarpon geographicum* and *Cladonia rangiferina* (see Mudd's excellent 'Manual of British Lichens'). The only Grass at all abundant was *Aira flexuosa.* I have already alluded to *Stipa pennata,* but I may add that it would well occupy two or three days fully to investigate the valley, its steep, often precipitous flanks, and the *tops* of the hills above; the last I have not yet visited. On a former occasion I saw *Sedum anglicum* growing plentifully on the other side of the valley, but on this, the breadth and force of the stream totally prevented any attempt to cross. This day's journey forcibly recalled to my memory the words of Curtis, when he visited the neighbourhood of Settle nearly a century ago (in July and August 1782). In one of his excursions thence he exclaimed, "What a treat for a botanist! What a recompense for one of the roughest journeys over Cam perhaps ever experienced!"

Returning to Kendal in the afternoon, we proceeded in the evening to the welcome abode of a near relative, within sight of Humphrey Head; but I have more than once before related in the 'Phytologist' the results of my botanical rambling over this interesting locality. On this occasion, June 12th, I found nothing additional of importance, except what I take to be *Galium montanum*, described by my intelligent friend Mr. J. G. Baker, as found near Settle. (See 'Phytologist,' New Series, vol. i. p. 182.) It occurred in one place, on rocky ground, as I approached the promontory. Near it, above in the wood, *Taxus baccata* and *Pyrus Aria* presented abundantly their strongly contrasted foliage. *Cochlearia danica* and *Armeria maritima* almost covered the adjoining beach, with other plants formerly enumerated. *Hypericum Androsæmum* was met with in the wood more copiously than before, but not in flower; whilst *Helianthemum canum*, on the cliffs above, was in perfection. In the wood, on the opposite (Lancaster) side of the mount, I collected what appears to be *Melampyrum sylvaticum*, and a few other sylvestral plants.

AZOREAN FLORA.

Our obliging friend Mr. Kennedy has put into our publisher's hands a letter from one of his correspondents, who is now in St. Michael's (San Miguel), acting as the superintendent at a botanical establishment in one of these islands. This gentleman writes to his friend Kennedy as follows. After a remark about the high price of necessaries in Ponta Delgada, the chief town, which has no trade except in oranges,* he proceeds thus:

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* "Oranges are imported in boxes containing from 250 and more, and in chests holding 500 to 1000. The quantity of fruit imported has been steadily increasing

a very fine garden here and a first-rate collection of plants of all kinds except Heaths, which are impatient of the great heat of the summer months, which here is almost tropical. New Holland species thrive well in the open air. We have *Araucarias* from forty to fifty feet high; and *Banksias* and *Dryandras* grow too fast to live long.

The great enemy to vegetation is the wind, which here is so violent that no tree can resist its force. All arboreal vegetation, unless protected, is torn up by the roots or broken by the severity of the winds. All plants suffer from these visitations.*

Another enemy against which we have to contend is the salt spray, which these awful tempests drive inland for miles and wet the plants, several of which will not endure this salt-water drenching. These storms are all from the south.

Ferns are neither plentiful nor of the most prized kinds; one of the commonest is *Balantium culcita,* Kaulf. (*Dicksonia culcita,* L'Hérit.) This grows on open parts, at about 2000 feet above the level of the sea. It does not thrive in our garden.

The whole of these islands are volcanic, and the mountains which cover the whole surface are lofty and precipitous, and their

---

for some years past. In the three years ending with 1842, the average imports were 334,070 boxes; in the five years ending with 1850, they had increased to 380,000 boxes. Since then the quantity has been computed in bushels. The average annual imports in the five years ending with 1860 were 977,440 bushels. The quantity taken for consumption has now reached upwards of 1,000,000 bushels; and, assuming each bushel to contain 650, this would give 650 millions of oranges, or about 22 for each soul of the population in the kingdom. The Azores, or Western Islands, from whence the finest St. Michael oranges come, furnish us with the largest supply. The imports from thence have doubled in the last five years. The expense of walling and planting an acre of orange garden is stated to be £15 for the wall, £8 for 65 trees, and £2 for labour. It yields half a crop of beans or Indian corn during seven years, but no oranges; from eight to eleven years half a crop of oranges is obtained; then a full crop, which is sold for £10 to £15. Each tree on arriving at maturity will produce annually, on an average, 12,000 to 16,000 oranges; one grower is said to have picked 26,000 from a single tree. The tree blooms in March and April, and oranges are gathered for the London market as early as November. The Portuguese never eat them before the end of January, at which time they possess their full flavour."—*Gardeners' Chronicle.*

* The history of our insular colonies supports this; see 'Phytologist,' vol. vi. p. 32. There is the following quotation from a New Zealand paper:—"Canterbury (in New Zealand) certainly gives promise of being a first-rate fruit-growing country, wherever due precaution is taken to provide the first requisite of successful gardening, viz. good shelter."

tops are generally hidden by misty clouds. Smoking craters and hot springs abound; and sometimes so close to a cold one, that you may put your thumb into a spring which will boil an egg in three minutes and your little finger in another which is chilling cold.

The usual arboreous plant is *Erica mediterranea,* which grows everywhere from chinks in the rocks. The country is all rock, and all the rocks are honeycombed, as lava usually is.

The orange groves are fine when well sheltered by high stone walls, and where the soil is good. St. Michael oranges have a high reputation in Europe.

Pittosporum undulatum, a New Holland plant, is quite naturalized in our groves and gardens, many of which, ours among the rest, are like an Indian jungle, the plants are so crowded and drawn up. I am well pleased with the productions of these islands, but the places themselves are like penal settlements, and the natives are poor and also excessively conceited: though few of them have so much as a shoe to their foot, they despise people of other nations, and especially look upon Englishmen as a very inferior race, much lower in the scale of humanity than they themselves. Their ignorance is not overmatched by their conceit and their poverty, prominent though these qualities be.

Our friend's correspondent, Mr. Rieth, concludes with the expression of his longings for English newspapers and for letters from his friends. No marvel that he is heartily sick of a place like a convict establishment, and feels the want of something to relieve him from the tedium of so wretched an abode.

The Azores, like other volcanic islands, are probably still on the increase; for as late as since 1811 new islands have been emerging from the deep, and it is possible that some of those formed at an earlier period may have increased in their dimensions.

It would be worth the labour to write a brief history of the vegetation of some of the recently formed islands, said to be already 3000 feet high. As the plants of the entire group are probably not much above 400, those of a small, newly-born island would not probably be more than thirty or forty. But this would be a very interesting bit of the history of botany. Would it throw any light on the origin of species?

The *endemic* plants of the Azores (this formidable term means *peculiar*—found there and nowhere else) are fifty, or, in other terms, they constitute one-eighth of the entire vegetation of these islands; or in every eight Azorean plants one is found *only* here. Of these only five are cryptogamous species. The vascular plants of the British isles are probably about four times as many as the plants of the Azorean group. We know that an eighth part of these is not endemic to the British Isles. Is there one in a hundred peculiar to our native land? Is there one in a thousand which is only produced here and nowhere else? Is there as many as one?

Some will say, Yes, *Primula scotica!* Others will say, Nay, this is only a variety of *P. farinosa,* as it was long called. But an eighth part is a large proportion of endemic species! How came they there? Did the seeds or the roots of these fifty peculiar plants retain their vitality under water during thousands of years? Few would assert this. It may amuse the believers in Mr. Darwin's theory of the origin of species to hear that there are some people who want to know where the forty-three single plants and the four doubles (for there are two Spurges and two Nettles among these strict Azoreans) existed without increasing their progeny till the islands were in a condition to receive them and to afford them a habitation and a home where they could increase and multiply as they now do. Were they created when the land was drained?

Those who can crack this nut have better teeth than we,—but ours are aged,—and especially if they believe what we do not, that only a single hermaphrodite plant and a pair of monœcious species were originally created. It is not easy to account for their long lives, nor to imagine where they lived, nor to conceive why they were formed at all, when there was no place for them to occupy. These are questions to be solved only by those who can see further into nature's secrets than the mason can see into the millstone.

The climate of this insular group is about the same as that of the south of Portugal and Sicily, only rather moister. The lowest temperature is in January, 8° R., or about 50° Fahr., and the highest in August, 20° R., or 90° Fahr.

Heavy rains fall between the months of December and March inclusive, and these, by washing the rocky ground, diminish the natural fertility of the soil. Hence the vegetation is both scanty in number of kinds and generally stunted.

This is the case especially with trees; and the devastation caused by the violence of the terrific storms with which these islands are visited is irreparable. Natural shelter is scarcely procurable, and artificial protection or high stone walls are erected, which are of course too expensive to be adopted except for the preservation of orange-trees—objects of commercial importance.

The Flora is rather meagre when compared with the extent of the islands.

The number of the Azorean plants of all kinds, as localized and described (see 'Flora Azorica,' by Hochstetter, father and son, edited by M. Seubert, Ph.D., etc.: Bonn, 1844), is 400. 50 are peculiar to the Azores; 316 are European; 23 are Madeira and Canary plants; 5 are African, and 6 American.

The botany and geology of the Azorean islands were investigated by the celebrated Chr. Fr. Hochstetter and his son, who were accompanied by Rud. Gygax, a Swiss mineralogist, in 1838; and the result of their labours was published at Bonn, as above stated.

These islands, for they constitute a numerous group, are almost equally distant from the two older continents of Europe and Africa and rather further from America; they are included between the 37th and 40th parallels of north latitude, and between 25 and 31 degrees west from Greenwich. They are 550 miles distant from the Madeiras and 740 from the Canary Islands.

Several English works on these islands had been published prior to the visit of the previously named *savants*, viz. by Fr. Masson (see Phil. Trans. vol. lxiii. 1778); by Ashe ('History of the Azores,' 1813, 4to); J. Webster, Boston, 1821; Captain Boid (Boyd), London, 1835; etc. etc.

The origin of these islands, or of some of them, is volcanic; extinct craters are still conspicuous, and on the loftiest hills (mountains), 7000 feet high, smoke and vapours are still issuing. In one island alone, St. Maria, there are calcareous strata, rich in fossils. In this island there are also beds of plastic clay, which the natives can use in their pottery works.

Flora Azorica.

As a sample or as samples of the Azorean flora, the following plants are entered; the first group are common in the British

Isles and widely distributed, the second group are also of home growth, but not so common as the former, and the third are all rare plants in our kingdom. The fourth group comprehends plants either peculiar to the Azores or species with which it is desirable that we should be better acquainted.

First Group :—

Holcus mollis.
Anthoxanthum odoratum.
Triticum repens.
Carex flava.
Carex stellulata.
Eleocharis palustris.
Juncus bufonius.
Juncus uliginosus
Potamogeton natans.
Lemna minor.
Callitriche verna.
Polygonum Persicaria.
Plantago major.
Plantago lanceolata.

Filago germanica.
Galium Aparine.
Galiumpa lustre.
Prunella vulgaris.
Convolvulus arvensis.
Veronica arvensis.
Veronica officinalis.
Euphrasia officinalis.
Calluna vulgaris.
Helosciadium nodiflorum.
Ranunculus repens.
Fumaria officinalis.
Nasturtium officinale.
Sisymbrium officinale.

Sagina procumbens.
Silene inflata.
Polygala vulgaris.
Geranium robertianum.
Peplis Portula.
Rubus fruticosus.
Potentilla Tormentilla.
Potentilla reptans.
Sarothamnus Scoparius.
Medicago lupulina.
Trifolium repens.
Lotus corniculatus.

Second Group. The following British species are not so common as the above:—

Trifolium procumbens.
Trifolium scabrum.
Agrimonia Eupatoria.
Poterium Sanguisorba.
Hypericum perforatum.
Hypericum humifusum.
Malva rotundifolia.
Chelidonium majus.
Sinapis nigra.
Lysimachia nemorum.

Anagallis arvensis.
Veronica Anagallis.
Solanum nigrum.
Echium vulgare.
Myosotis versicolor.
Verbena officinalis.
Sherardia arvensis.
Carduus tenuiflorus.
Chrysanthemum segetum.
Plantago media.

Daphne laureola.
Chenopodium rubrum.
Chenopodium murale.
Potamogeton pectinatus.
Isolepis fluitans.
Carex divulsa.
Hordeum murinum.
Festuca bromoides.
Poa loliacea (Triticum loliaceum).

Third Group. Rare plants common to the Azorean and British isles :—

Cynodon Dactylon.
Polypogon monspeliensis.
Bromus madritensis.
Lagurus ovatus.
Cyperus longus.
Euphorbia Peplis.
Euphorbia Lathyris.
Plantago Lagopus.
Filago gallica.

Mentha viridis.
Mentha rotundifolia.
Echium violaceum.
Antirrhinum Orontium.
Sibthorpia europæa.
Fœniculum vulgare.
Tillæa muscosa.
Delphinium Consolida.
Senebiera pinnatifida.

Oxalis corniculata.
Lythrum hyssopifolium.
Erodium malachoides.
Melilotus parviflora.
Trifolium glomeratum.
Lotus angustissimus.
Lathyrus Aphaca.

The most valuable productions of these islands are the introduced and cultivated species, viz. sugar and dyeing plants (*Saccharum* and *Isatis*), now discontinued, cereals, Potatoes, Yams, Lupines, Vetches, Flax, etc. Among trees, the vine, the date, the dragon-tree (*Dracæna Draco*), and above all the orange-tree, of which two species are cultivated, viz. *Citrus Aurantium*, Orange, and *C. medica*, Citron.

This is the most important growth of these islands, and the staple of their commercial intercourse with Europe. The plantations of these trees, or orange-groves, are protected by lofty stone walls, and further sheltered by the Azorean Myrtle (*Myrica Faya*) and by *Picconia excelsa*, Dec., *Olea excelsa*, Aiton, which are extensively planted about orchards, and reach to upwards of twenty feet in height.

The produce of orange-trees in St. Michael's appears fabulous, amounting in numbers from 8000 to 20,000 per tree, and in bulk sufficient to load a ship.

The Azorean flora has a far closer relationship with that of the south-west of Europe than it has with that of Africa. All the Orders represented in the Azores are common to the British Isles except *Asclepiadeæ*, *Oleaceæ*, and *Laurineæ*. Most of the genera are common to both these distant insular groups, and about 130 species are found both in the Azorean and in the British Isles.

Of the 400 Azoric plants 50 are peculiar (endemic); 23 are common to the three insular groups, Azores, Madeira, and Cape de Verd; 316 are European, 5 are African, and 6 American.

Species Azoricæ.

Some of the commonest and most widely distributed of our Ferns are Azorean, viz. *Polypodium vulgare* (var. *serratum*), *Pteris aquilina*, *Aspidium angulare*, *Cystopteris fragilis*, *Osmunda regalis*.

Among the Grasses the following are very common:—

Holcus mollis.
Anthoxanthum odoratum.
Aira caryophyllea.
Briza.
Triticum repens.
Hordeum murinum.
Bromus madritensis.
Cynosurus echinatus.
Lagurus ovatus.

Among the *Carices*, *C. flava*, *C. stellulata*, and *C. divulsa* are common.

Isolepis fluitans.
Scirpus maritimus.
Eleocharis palustris.
Cyperus longus.
Potamogeton natans.
Potamogeton pectinatus.
Callitriche verna.
Euphorbia Peplis.
Euphorbia Lathyrus.
Parietaria officinalis.
Chenopodium urbicum.
Chenopodium murale.
Polygonum Persicaria.
Plantago Coronopus.
Plantago major.
Plantago media.
Plantago lanceolata.
Plantago Lagopus.

127 vascular plants are common to the Azorean and British Isles. Some of them are among the most common, some the scarcest.

The following Azorean plants are peculiarly interesting, either being peculiar species or else belonging to well-known genera:—

Of the order ULVACEÆ there is in this Flora (Hochstetter's) a figure of *Bryopsis penicillata* with a description, p. 9.

In HEPATICÆ, *Rhacotheca azorica,* with figures and an ample description.

In JUNGERMANNIACEÆ, *Gymnomitrion erythrorhizum.*

In MUSCI, *Hypnum Hochstetteri.*

In FILICES, *Alantodia,* var. *azorica.*

In LYCOPODIACEÆ, *Lycopodium cernuum.*

We omit the *Gramineæ* and *Cyperaceæ*, etc., for want of room.

Among the Orchids there are two *Habenarias* peculiar to the Azores, *H. micrantha* and *H. longibracteata.*

The following are probably desirable species, viz. *Euphorbia azorica, Urtica azorica, Plantago azorica, Scabiosa nitens, S. neglecta. Bellis azorica* and *Solidago azorica* are both interesting species, especially the latter, which might be an ornament to the shrubbery. *Tolpis nobilis* is truly a noble plant, and as it grows at a great altitude, upwards of 3000 feet, is probably hardy enough to resist our winter's cold.

We should like to see specimens of *Erythræa latifolia,* from St. Michael's and Terceira.

E. diffusa is a species peculiar to these islands. *Myosotis murina* is another desirable plant. *Euphrasia grandiflora* is an elegant species, with rounded, singularly curled, rigid leaves. It grows between 3000 and 4000 feet altitude, and has large, handsome flowers; a fine plant for artificial rocks.

There is a new *Rubus, R. Hochstetterorum,* and a new *Rhamnus,* viz. *R. latifolius,* which has leaves five inches long and two and a half broad. *Hypericum foliosum,* Ait., is another desirable species. *Cerastium azoricum,* of which there are several varieties, might be a useful plant.

Sanicula azorica is, judging from its figure in 'Flora Azorica,' a lovely plant; the foliage is exquisite, and as it grows between the altitudes of 2000 and 4000 feet would probably succeed in our variable though not severe climate.

It is probable that the *Erica mediterranea* of our correspondent should be *E. azorica.* This and *E. scoparia* are the only Heaths observed by the Hochstetters in these islands. This shrub, which reaches a height of fifteen feet, grows as high up the sides of the rocky mountains as 6000 feet. It might be worth trying as an inmate of our more sheltered shrubberies.

There are also two *Vaccinia* which might become denizens of our gardens, viz. *V. longiflorum* and *V. cylindraceum;* the latter is almost a tree, and grows at as lofty an altitude as 5000 feet.

In concluding this rather long article, we beg leave to give our readers a hint or two about the introduction into their collections of some of the plants recently published in our columns as natives of the Pyrenees.

Among these, *Ramonda pyrenaica* is specially desirable; it is a very rare plant, and seldom to be seen in collections.

Several of the Editor's correspondents have seen samples of this rare species, for many have been distributed. To amateur cultivators and to nurserymen these alpines are especially recommended; indeed they commend themselves by their beauty, neat growth, and suitability to our somewhat cold and moist climate.

Nothing can exceed the brilliancy and intensity of the colours of the alpine Gentians, and their habit is unexceptionable. The same may be said of many Primulas, Pediculares, and even of the alpine Buttercups.

We have the addresses of botanists, resident in the Hautes and Central Pyrenees, who will, as matters of business and on moderate terms, supply applicants with both seeds and roots of these interesting species.

PROFESSORS JOHN AND THOMAS MARTYN.

Extracts from Gorham's Memoirs of Professors John and Thomas Martyn, with Notes and Remarks thereon.—June 5, 1862.

DAPHNE MEZEREUM.

"Nothing new," wrote Professor Martyn to his friend Dr. Pulteney (Aug. 6th, 1777), "has occurred to me here" (Little Marlow, Bucks), "except that *Daphne Mezereum* grows wild commonly in our woods."

Can any of the readers of the 'Phytologist' confirm the fact above stated? The authority is unquestionable, but is the *fact* itself generally known? The Professor resided during some years at Little Marlow, of which parish he was then incumbent. (Gorham's Memoirs of John Martyn, F.R.S., and of Thomas Martyn, B.D., F.R.S., F.L.S., Professors of Botany in the University of Cambridge. 8vo. 1830.)

List of Rare Plants in Surrey. (See 'Phytologist,' June, 1862.)

"About this time, he," Professor Thomas Martyn, "volunteered his services to Mr. Bray," one of the authors of Manning and Bray's History of Surrey, "by contributing" a list of rare plants in Surrey for his enlarged edition of Manning's history of that county.—*Note.* Mr. Bray completed this celebrated county history. Mr. Owen Manning lived to complete only the first volume; the work is in three volumes and very valuable. This list is printed in vol. iii. pp. lxv.–lxx. of that work, published in 1814. The plants noticed are chiefly those he met with in the years 1758–59, when visiting his father at the Hill House, Streatham.—Page 236.

County Histories and County Lists of Plants.

Professor Thomas Martyn wrote to his friend Dr. Pulteney, from Little Marlow, July 30th, 1783, on County Floras and County Lists of Plants, as follows:—"Will it not be remarkable if Cambridgeshire should have *four* Floras, viz. Ray's in 1660, Professor John Martyn's in 1727, Professor Thos. Martyn's in 1763, and Relhan's in 1785 [Sibthorp's 'Flora Oxoniensis' was not published till 1794], before Oxfordshire has one? Is it not also remarkable, that when Mr. Hasted designed to give a catalogue of the wild plants of Kent, he should be wholly unacquainted with Hudson's 'Flora,' and even Ray's Synopsis; and that to the last he should be ignorant of Old Johnson's 'Itinerary'? It is not necessary that every antiquary should be a naturalist; but if he steps aside into the *flowery path,* he should at least procure a friend to direct his steps."—Page 165.

Dr. Goodenough's 'BOTANICA METRICA.'

From Professor Thos. Martyn's very interesting letters, published in Gorham's Memoirs, the following notice of the bishop's 'Botanica Metrica' is taken:—"Dr. Goodenough has long been about a 'Botanica Metrica,' which I presume will be more extensive and classical, as I understand he means to give authorities."

Does any reader of this note know aught about the above proposed botanical catalogue? Will any correspondent send the question to the editor of 'Notes and Queries.'

NICANDRA PHYSALOIDES.—*Peruvian Deadly Nightshade.*

This American exotic, like the Potato, has made several efforts to establish itself in this country. It abounded some years ago in gardens and cornfields about Guildford and Shalford, county Surrey; and only last year, summer, 1861, it appeared again on rubbish between Little Chelsea and Parson's Green.

The following extract from a letter to a young lady, sent by Professor Thos. Martyn with seeds of this plant, is a fair example of the kind, amiable, condescending disposition of the venerable botanist; he was now an octogenarian:—

"The seeds might have been enclosed in a nutshell; but as you seem curious in such matters, I was desirous you should observe the apparatus which nature has provided for the protection of the seed. There is first a shell, which, being thin and brittle, is, next, itself protected by the permanent calyx, in form of a regular pentagon with five bastions. I presume you do not send the seeds into Scotland, for they will not vegetate there, except in a hotbed; indeed even here (Bedfordshire), in untoward seasons, they scarcely flower soon enough for the seeds to ripen; it is safer, therefore, to commit a few of them to a gentle hotbed. You are aware that the plant is an annual."—Memoirs, p. 239.

HEMEROCALLIS FULVA *and* H. FLAVA.

"In the year 1788, Miss Welch (a woman of distinguished mental ability, very intimate with Dr. Johnson, as her father, a well-known magistrate, had been; her sister was Mrs. Nollekens, the wife of the eminent sculptor) laid out a new garden at Ardenham Hill, near Aylesbury, in which she removed several plants from Hampstead. Dividing a root of *Hemerocallis fulva,* she put one part into an argillaceous soil, and the other into a soil composed of rubbish from old ruins. The former remained unchanged; but the latter blossomed with the tint and appearance of *Hemerocallis flava.*"—See Trans. Linn. Soc. 1790, vol. ii. p. 353.

The above fact is deserving of notice. But it may be observed that there are other marks which may serve to distinguish the above species, besides the colours of the flowers. The habit of the two plants is not alike. *H. flava* is taller and more elegant than *H. fulva,* and the latter increases more rapidly by runners and suckers than the former. The change of colour is a notable fact, especially as it is effected by a change of soil. The writer of this note does not wish to have examples of plants which are mutable in colour, such as the Primrose, the Hydrangea, etc., but he would be much obliged to any one to tell him if the two common Day-lilies are mutable both in colour and species.

Professor Thomas Martyn, on Natural and Artificial Systems of Botany. Extract of a Letter from Professor Martyn to Sir J. E. Smith.—March 9th, 1821.

"Your *Grammar of Botany* plainly speaks the hand of a master; concise yet full, remarkable for clearness, etc. . . . When your intended *Flora* makes its appearance, the British botanist will find everything that he wants in these three works of yours" (viz. the 'English Flora,' the 'Grammar of Botany,' and the 'Introduction to Physiological and Systematical Botany'). "I am not such a bigot as to think lightly of the *natural orders,* imperfect as our present knowledge of them is. Had I been younger, that very circumstance would have incited me to pursue so delectable a subject, and I hope you will continue to do it. I am only sometimes vexed when they would fain persuade me that the natural system may *supersede* the artificial."

The above extract is a conclusive proof of one thing, namely, that the professor was not a prophet, for the *natural* system has long completely superseded the *artificial*, at least in England and Germany; and possibly is evidence of a second, namely, that the British botanists of the present day want to find several things which are *not to be found* in the *three* works quoted above.

The reflective will say, How transitory is fame when it is founded on mere science! Sir J. E. Smith's great work, 'On the Plants of our Native Island,' had not been completed ten years, ere the British botanist had his attention solicited by other works, which have long superseded the now obsolete volumes of the learned author of the 'English Flora.' *Sic transit botanicorum gloria.* The fame even of botanists is not sempiternal; it does not last for ever.

EXTRACTS FROM CORRESPONDENCE.

August 7th, 1862.

In the Botanical Garden of Rouen I saw the other day (July 18, 1862,) a hybrid between the *Pètunia* and the *Nicotiana Tabacum*; and in the same place a magnificent example of Mullein, labelled *V. Lychnitis,* of which the leaves were like those of the *Lychnitis,* but the spike of flowers like those of *thapsiforme,* but much larger. The gardener told me he had gathered the plant (I presume the seeds of the original plant) at Dieppe Salle, where the true, small-flowered, pale-white plant grows; and that it had *improved* by cultivation. I have no doubt it had hybridized with the *thapsiforme.* If it bears ripe seeds, I will send you some of the seeds.

I hope you will try the experiment of the *Centaurea* seeds, as I shall be curious to know if you get the *nigra* or the rayed variety. My garden is not a proper place to try the experiment in, as I have so many different sorts of Centaureas.—E. M. A.

Trifolium repens.—White Clover.

Considerable doubts have arisen about the originality of the above plant in Ireland (see 'Phytologist,' vol. vi. p. 64, number for February, 1862): Mr. W. writes, "It is hardly likely that *Trifolium repens*, Dutch Clover, was introduced into Ireland so early as St. Patrick's time."

Another writer states that none of the Trefoils are indigenous in Ireland nor in Scotland either; and though botanists in their descriptive catalogues or floras give but uncertain information on this head, I, judging from observation, am disposed to question the nativity of both red and white Clover in the north-eastern parts of Scotland.

I remember having seen *T. medium* growing wild in Aberdeenshire, as well as in other parts of Scotland; and I have often seen *T. repens* naturalized on commons and bushy open places, whither it was conveyed in the stomachs of sheep and cattle, and dropped where they lay down to ruminate.

Both red and white Clover were, and probably are still, agrarial products. The seeds were usually sown with barley after turnips; and the crop of Clover grown with Ray Grass was mown the first year and grazed the second.

I am aware that there is considerable difference between the climate of the south and west, and that of the east and north, of Scotland. In the Rev. G. Gordon's 'Flora of Moray,' *T. pratense* is marked doubtfully wild. I never saw this species wild in the Garioch district of Aberdeenshire, though I have often seen *T. repens* wild here and there, as above stated. Both of these plants were treated by the farmers as agrarials, viz. like Rib Grass, Ray Grass, and other grass and fodder plants. I have never seen the white Clover cultivated in the south of England, where it is unquestionably wild.—ALPHA.

Rare Plants about Henley, Oxon.

"... In the woods chiefly north of Lord Cadogan's house, etc., were the most plenty of rare, beautiful, and, as the botanists say, *polite plants*, of any part of the kingdom. Not one mentioned in that district."—Letters of Mr. Daniel Prince, August 13, 1781, from Nichols's 'Literary Anecdotes,' vol. iii. p. 695.

"Mr. D. Prince, an Oxford bookseller, died in his eighty-fifth year."—Nichols's Anecdotes, vol. iii. p. 685.

In one or two places in this part of Kent, Broome Park, eight miles from Canterbury, on the Dover road, "Adder's Tongue," *Ophioglossum*, is found, but not very common. "Paris quadrifolia" is extremely abundant with me. It is ill-named, for I find it with four, five, six, seven, eight, and even nine leaves. The children of the poor stray into the woods in hot weather, eat the black venomous seed-vessel of this Herb Paris, stagger home, become narcotized, and die.

In Lapland and in Finmark (not Finland), I find *Angelica Archangelica* in abundance. The blanched, involuted, convoluted, undeveloped, flower-head, is much more nutty and tender than the best Celery.

Upon the whole, I consider *Splachnum luteum* (the flower of it) the most beautiful object north of the polar circle; it inhabits moist Pine-forests.

If you care to find new and good plants (new to the British botanist), I know no region half so good as Carniola; the best head-quarters is the hamlet of Landohl, near Prevaldt, twenty miles due north of Trieste; time of year, May, when the abundance of good wild flowers is quite wonderful; there are also bears and capercalzies in tolerable abundance.—G. C. O.

Hymenophyllum tunbridgense and H. Wilsoni.

In Ray's 'Synopsis,' 1724, there is the following observation on the above, p. 123:—"*Adiantum petræum perpusillum anglicum.* This was first shown to Mr. Ray by Mr. Newton, who, in company with Mr. Lawson, found it on Buzzard Rough Crag, near Wrenose, Westmoreland, among the Moss. Mr. Dare found it near Tunbridge; Dr. Richardson upon the moist rocks in Wales, and near Settle, Yorkshire. It grows on the left hand as soon as you enter the mountain to go to the old castle near Lhanperis. Found also plentifully by Mr. Rand and Mr. Sherard amongst the pebbles at Cockbush, six or seven miles from Chichester, on the coast of Sussex." From the above it appears that Mr. Dare first found the Tunbridge Fern, unless the Westmoreland plant is the same as the Sussex one. Botanists generally believe that the northern and Welsh forms are *H. Wilsoni*, and the Sussex one *H. tunbridgense.*—BETA.

The following letter, accompanied with Sole's 'Mints,' from an eminent professor and demonstrator in botany to the Apothecaries' Company, will speak for itself. Mr. Jones had previously served as an assistant to the worthy apothecary of Bath, the author of the work on the British Mints:—

"St. Bartholomew's Hospital, Saturday, July 26th, 1823.

"My dear Sir,—Permit me most respectfully to express to you my grateful acknowledgments for your kind donation of your old friend's treatise on the British Mints. The impression of the plates is a very excellent one; and give me leave to assure you I shall always value the book while I live, and shall keep your very handsome and kind letter addressed to me in it, that independently of the gift, I have the additional gratification of remembering the donor's very gentlemanly and obliging attention conferred on his very humble servant,

"THOMAS WHEELER.

"When I was at St. Paul's School, I remember a Mr. Robert Sole, who went to the University of Cambridge, and was, as he used to tell us, the brother to Mr. Sole, the apothecary, of Bath.

"T. WHEELER.

"Mr. David Henry Jones, Apothecary, Aldersgate Street."

Stratiotes aloides (syn. *Acoroides, Alismoides, Aloides, Nymphoides*), *Limnocharis:* Parkinson, 1249; Ger. 826; Bauh. 286; Ray, 290.

Ray's 'Catalogus Plantarum,' p. 199:—"*Militaris aizoides*, Ger.; *Stratiotes* sive *Militaris aizoides*, Park.; *Aloe* 4, sive *palustris*, C.B.; *Aloe* sive *Aizoon palustre*, J. B.: Water Sengreen, or Freshwater Souldier. In fluentis (aquæ) pigrioribus et palustribus fossis in insula Eliensi copiose."

Lobel gives a longish dissertation on the origin of the name *Militaris*, as being descriptive of the habit of the plant:—"Nisi quis harioletur militarum, quia sine radice, quasi sine lare et re ut miles victitet vitam incertam et fluctuantem."

He says, "it is common in stagnant rivers in Belgium, not far from Antwerp." (Adv. 334.) In the observations, p. 204, there is a good figure of this plant, but he does not tell his readers that it grew in England.

"*Stratiotes sive Militaris aizoides*, Water Souldier," Park. 1249. "The Water Souldier hath divers and sundry long narrow leaves, sharpe pointed, set close together somewhat like unto the leaves of Aloes for the forme, but much less, and sharpely toothed about the edges like it also, etc. . . . It groweth in Germany, and the Low Countries also, plentifully, and in Italy and other countries also." Parkinson does not state that it grew in

England. Those who have seen this plant in the eastern counties of England or in some of the western, will not hesitate to say that it is a genuine British species.

Tradescant's Garden.

From an account of the remains of John Tradescant's garden, by Mr. W. Watson, F.R.S. (see Phil. Tr.):—"We found there the *Borago latifolia sempervirens*, C. B., *Polygonatum vulgare latifolium*, C. B., *Aristolochia Clematitis recta*, C. B., and *Dracontium*, Dod. Yet remain two trees of the *Arbutus*, also of *Rhamnus catharticus*, twenty feet high."—Read May 25, 1749.

Reviews.

The Flora of Essex. *By* GEO. S. GIBSON, F.L.S.
London: W. Pamplin.

Owing to a press of matter, supplied during the last six months, this, the review department of the journal (an odd name for a monthly periodical; but there are anomalies in literature, as there are in science), has been in abeyance. The 'Flora of Essex' is the last received, and it is the first to be noticed; reversing the usual practice, "first come first served," this book, though the most recent arrival, is placed first for review, on the new principle of "last come first served."

The modest and sensible preface to the 'Essex Flora,' from which (*i. e.* the preface) the following quotations are taken, will give the reader an adequate synopsis of the contents of this work. After stating that detailed localities are given under each species, and several tables useful to such as desire to study the history and distribution of the Essex plants, there is the following:—"The first of these tables is a list of the rarer species of plants with the date of their first recorded discovery in Essex, the name of the original discoverer, and the year when they were last observed." Another table shows what plants are native and what are introduced. "The third is a comparison of the plants of Essex with those of the adjacent counties, Cambridgeshire, Hertfordshire, Suffolk, and Kent. The fourth is a summary of the Essex flora, compared with the sixth chapter of the fourth volume of Watson's 'Cybele Britannica.' A fifth list contains plants not hitherto found in the county and which are likely to occur in it, and of those supposed to be lost. The sixth (not a table) is an account of some of the more prominent Essex botanists,—Ray, Dale, Warner, and E. Forster." (Preface, p. xi.)

Between these tables (for the first is prefixed, not appended) the Orders, genera, and species of the Essex plants are named and localized. The arrangement is the same as usual, viz. that which is by courtesy called the natural system; and this occupies the greater part of the book, viz. 407 pages. The Appendix contains the earliest and latest notices of the rare and of the questionable Essex species; also the tables of comparative rarity, frequency, etc., as before quoted.

A quotation, or occasionally two, from each of these prominent divisions will put the reader in possession of the merits of the 'Flora of Essex.'

The following species appear only in *one* of the eight districts into which Essex is divided, (see table, p. xxviii. etc.):—*Thalictrum saxatile, Ranunculus Drouetii, R. floribundus, R. peltatus, R. Lingua, Fumaria micrantha, F. parviflora, F. Vaillantii, Lavatera arborea, Viola palustris, Dianthus plumarius, D. deltoides.* In two districts grow *Ranunculus confusus, R. fluitans, Aconitum Napellus, Papaver Lecoqii, P. somniferum, Isatis tinctoria, Iberis amara,* etc. Three districts are ornamented with the flowers of *Ranunculus heterophyllus, R. trichophyllus, Papaver hybridum, Turritis glabra,* etc.

Cardamine sylvatica grows in four districts "cum multis aliis quas nunc præscribere longum est," as they teach and learn at Eton, and which in plain English means would be very tedious and useless to the reader and tiresome to the writer.

The preceding extract from this, the first table, is offered as an example of the pains taken to exhibit the distribution of the rarer species, and also to show that the results are not so great as the labour spent in trying to educe them. The novelties once all comprehended under the common name *Ranunculus aquatilis* are probably found or might be observed in more than in one, two, or three districts. The table is an effort to define the relations of species to particular soils and situations, which subsequent investigations will possibly much enlarge. The author's own experience will attest the justice of this observation.

Another quotation from the same table will set in a still clearer light the inadequacy of all such well-meant endeavours. *Ranunculus acris* and *Nymphæa alba* are found in all the districts; but every one knows that these two plants are not equally common: for example, *R. acris* grows in every meadow, but the white Water-lily does not grow in every pond, nor in every deep pool or stagnant river.

Hypericum Androsæmum is not half so common as *H. perforatum* is; yet both are found in all the districts. Of this the author was well aware, for he states, p. 57, that *H. perforatum* is "commonly found in all the districts;" and also that *H. Androsæmum* is not uncommon about Halstead, but "very sparingly about Newport, etc."

Silybum Marianum and *Lapsana communis* are contrasted to prove that the utility of these tables, professing to show the frequency of plants, may be over-estimated. Both the above plants appear in all the districts; but *L. communis* is "commonly distributed throughout the county, and *S. Marianum* is so rare as to have every station where it occurs entered."

If the reader will turn to the table on page 409, viz. the list of rare plants, with the earliest and latest notices of their having been seen, he will observe that *Thalictrum saxatile*, which was discovered in 1861, appears in both tables, viz. that on page xxviii. and that on page 409; while all the modern *Ranunculi* are omitted in the latter table, although equally rare, if absolute reliance is to be placed on the first table. It is not an unreasonable assumption that the author believed that the batrachian *Ranunculi* which are registered as occurring in one, two, or three districts, would eventually be detected in almost every ditch in the marshes of Essex.

Papaver Lecoqii has been found in only two districts; does not the author expect to find it in most cornfields where *P. dubium* grows? It is not entered in his table on page 409.

The next table, see Appendix no. 2, is a list of the wild plants of Essex distributed into three classes, viz. *common*, rather local, very local; and again into native, possibly introduced, probably introduced, and certainly introduced; to which is added a very large class, which has but slender claims to nativity or naturalization, though they do occasionally intrude amongst better company. Some members of this disreputable class have been seen only on doubtful authority, or rather it is doubtful if they were ever seen, yet they have been so fortunate as to obtain *one* voucher, but one only to be credited or to be believed if he asserts a common fact, but to be suspected if the fact be rare. If a British jury were empanelled to try the validity of the claims of the members of this last class, how many would have their nationality admitted? Could twelve or twenty-four botanists taken from an alphabetical list ever agree about the nativity of one-third of the usually reputed British species?

The table, Appendix no. 3, is a comparison of the flora of Essex with the floras of Cambridgeshire, Hertfordshire, Suffolk, and Kent. Why is not Middlesex entered? We should be very thankful to receive well-defined localities for the undermentioned plants, entered in the 'Flora of Essex' as Kentish (see page 430):—*Lythrum hyssopifolium*, *Scleranthus perennis*, *Cicuta virosa*, and *Cyperus longus*. Stations for *Equisetum hyemale* and *Sedum anglicum* would be desirable. In return for the above requested information, we will tell the author of the 'Flora of Essex' where *Wahlenbergia hederacea* grows in Kent, or, if he likes, conduct him to the very place where it was gathered, not quite two years ago; and we will tell him where he will see a report of *Linum perenne* as a Kentish plant. We will also tell him where *Carex extensa* grows. We will undertake to show him localities for *Symphytum tuberosum* and *Stratiotes aloides* considerably further south than the county of Essex.

Again, another recent locality will be given him for *Lathyrus tuberosus;* and he is welcome to a fresh specimen of this reputed Essex plant from a root which was collected in a county south of the Thames. (Note. *Bupleurum falcatum* is from the same locality.)

Appendix no. 6, page 444, contains brief biographies of Ray, Dale, Warner, and the late Mr. E. Forster; the mention of the latter, who lived so long and usefully, reminds his contemporaries that botanists do not live for ever—they are not sempiternal nor perennial.

In the name of the botanists of England, gratitude is expressed and thanks tendered to the author of the 'Flora of Essex' for his notice of one of the most distinguished of the modern botanists of the county. He was *par excellence* not merely the botanist of Essex but of the neighbourhood of London, and of England.

In our simplicity we asked, when Robert Brown left the station he so long honourably filled, "who will take his place in the botanical world?" There are great men still in being; but comparisons are odious, hated by those who have the misfortune to be compared. Mr. E. Forster and Mr. W. Borrer are kindred spirits, "lovely in their lives," were attached to the harmless science, but both lived for higher objects than botany. They were true philanthropists, genuine lovers of humanity, and natheless actuated by higher motives than philanthropy. Can any of our readers tell or surmise upon whom their mantle has fallen?

The reviewer has now given his readers a very brief summary of the 'Flora of Essex,' and he will not obtrude his opinion of its merits. Let the readers of the Flora judge for themselves. He will not however begrudge his own individual thanks, and he acknowledges the pleasure he has had in perusing a work of so much labour, research, and expense—a book which is so highly creditable to all who were engaged in its production, the printer, the engraver, and the author. Let it not be forgotten that the book is illustrated, and ornamented also with very excellent coloured drawings of the four plants presumed to be peculiar to Essex, viz. *Lathyrus tuberosus, L. hirsutus, Bupleurum falcatum,* and *Galium Vaillantii.* We are quite certain that the few botanists who will have the pleasure of seeing the 'Flora of Essex,' will enjoy its contents as much as ourselves.

That *Lathyrus hirsutus* is peculiar to Essex should be received *cum grano salis.* There are records of its being seen in other counties, and some of these are not unworthy of some respect. Derby, Durham, and Somerset have all been, even in modern times, debited with this species. The other three peculiar species have been observed in other parts of England, and as they are agrarials they may appear almost anywhere between the four seas.

No reader can reasonably expect a *first attempt* to be quite immaculate, nor *emaculate* like Gerard's 'Herbal' by Johnson; but it may be affirmed that the author and his friends have done their best, and their work, as the Germans say, will praise the workmen. ("Das Werk den Meister loben soll.") The author very modestly states that he is "aware of its shortcomings," and he indulges the charitable hope "that other labourers in the same field will endeavour to supply the deficiencies, which are to some extent unavoidable in a first attempt to describe the distribution of plants in an extensive county." The friendly aid of the 'Phytologist' is hereby freely proffered; its pages are free to all who have a new fact to publish, either on the nature, uses, or the distribution of plants.

The history of botany in Essex is an epitome of the history of the science in England. Among the early observers of Essex plants we find one of the universal favourites, the venerable JOHN GERARD, very frequently entered; he stands sponsor for above thirty plants, which still remain to attest the accurate observations of the brave ancient botanist.

The name of the eminent Ray occurs above fifty times as an authority for the localities of rare plants in Essex.

Parkinson is but rarely quoted, perhaps in about half-a-dozen places. Blackstone's work is easier to consult than the massive volume of the former, and, possibly not for this reason, his name appears about four times as often as Parkinson's. Warner is quoted probably thirty times.

But Edward Forster is most emphatically the hero of Essex botany. No ancient or modern botanist (all the living botanists, remember, *lector benevolentissime!* are expressly excluded from this comparison, in the charitable hope that they will not only surpass Warner, Ray, and Blackstone, but even E. Forster himself, in the number and importance of their discoveries) has approached the amiable botanist of Woodford in the merit of adding both plants and localities to the flora of Essex. His discoveries approach very nearly in number, those of the four united, viz. Gerard, Ray, Blackstone, and Warner, who may be regarded as the great ancient foundations and main pillars of Essex botany. British botanists (many of them) have still to learn their obligations to this eminent member of the fraternity, who for above sixty years explored Epping Forest, in all directions, from Harlow to Plaistow Marshes, and from the river Lea and Chingford Hatch to the Rodings, Hainault Forest, and Brentwood.

Mr. Edward Forster's labours were not confined within the limits, of a county, but were co-extensive with the extent of the kingdom. Of his discoveries and contributions to the science of British botany, Sowerby's great work on our native plants will be a satisfying and imperishable memorial.

It is not undeserving of notice that the progress of British botany has been very considerably indebted to members of the banking community. Our readers will readily anticipate that Mr. Dawson Turner, Mr. E. Forster, and Mr. W. Borrer are the botanists here alluded to. There are several persons living and still energetic amateurs, who, in the early part of their career, were contemporary with these eminent patrons and promoters of science.

Herbarium norddeutscher Pflanzen für angehende Lehrer, Pharmaceuten und alle Freunde der Botanik. In einzelnen Lieferungen herausgegeben von W. LASCH und C. BÆNITZ. Zweite Auflage. Abtheilung 1: *Goniopterides, Hydropterides, Selagines.* (Preis ⅔ Thlr.) Abtheilung 2: *Filices.* (Preis 1 Thlr.)

The above may be freely rendered in English as follows, and it is entered for the information of those who do not understand the original:—"A herbarium of North German plants for beginners, apothecaries, and all lovers of botany, published in parts by W. Lasch and C. Bænitz. Second edition. Part 1: *Equiseta, Marsiliaceæ, Salviniaceæ, Lycopodiaceæ.* Part 2: *Filices.*"

For several months the review department of the 'Phytologist' has been very much in arrear; and this is the apology we make to our readers and to the authors of the above-named work for the delay in announcing its appearance. We have not yet nearly exhausted the long-accumulating publications.

The editors, in a brief preface, inform the readers that their previously circulated specimens, viz. 'HERBARIUM MARKISCHER PFLANZEN' (30 no.), had a very favourable reception; "and the call for a second edition of the first portion," they remark, "is a proof that the undertaking has been both seasonable and duly supported."

"Our endeavours," they continue, "to render the present collection as comprehensive as possible have been ably seconded by the most eminent botanists, in all parts. To these friendly correspondents hearty thanks are duly tendered, especially for specimens of *Equisetum variegatum*, Schleich.; *Salvinia natans*, Hoffm.; *Isoetes lacustris, Grammitis Ceterach*, Sw., etc."

The portion before us contains all the British species of Horsetails (if *Equisetum Mackaii* be excepted); also *Pilularia, Salvinia, Isoetes,* all the Lycopods that grow in North Germany, and all the Ferns of the same extensive tract.

The title of the work, the preface and the contents, are printed on a folio sheet with a fly-leaf, and the specimens follow, from no. 1 to no. 49, viz. "*Equisetum arvense,* L., Acker-schachtelhalm, Sand- und Lehmacker; gemein. März, April. Bei Görlitz, von B. gesammelt." This or similar information is printed on each ticket, and the above may be rendered:—*Equisetum arvense,* Linn. Field-horsetail (Polishing-haulm), in sandy and clayey fields. Flowers March and April, collected at or near Görlitz, by B. (Bænitz). No. 49, *Struthiopteris germanica,* with a ticket similar to that of no. 1—or, the name of the species, the authority, the common name (German), the soil in which it grows, its census, time of flowering, the locality and collector.

The specimens are *all* extremely well dried, spread out, and strapped down. The paper is white, of about foolscap size (?), and the whole 49 are enclosed in a neat enough portfolio. About fifty fine specimens of plants, named, localized, etc., with printed tickets affixed, on as many half-sheets of writing paper, and a portfolio, is what may be called a bargain at a crown:

> "Wondrous cheap,
> And for the money quite a heap,
> Which any one would buy, with cash and sense."

Speaking seriously, we have never seen so cheap a lot; not even at Messrs. Stevens's, where large bundles of plants are sold for 10*s*., or even sometimes as low as a half-a-crown. But consider, *bone lector!* that usually several duplicates are found in these lots, and none of the examplés are mounted, and they are not seldom without names and destitute of any clue to their history.

We earnestly wish and have good hopes that, for the credit of the scientific world as well as for the promotion of botanical science, and for the help of tyros, young pharmaceutists, who should know what they buy of the itinerant herb collectors, success may attend this publication.

It was once thought that the addition of English names would be an improvement. A Frenchman would say, so would the French names. The scientific name is enough for all practical purposes; and this is truly the most practical and useful work on plants that has ever appeared.

The beautiful works of Reichenbach and Sowerby are not depreciated by comparison with these published examples of species by Lasch and Bænitz. Comparisons are odious or hateful only when one person or object is exalted at the expense of another.

This work, which is here so heartily commended for its excellence and usefulness, is cheaper than even the cheapest edition of 'English Botany;' it is certainly more valuable, inasmuch as the original objects, the things themselves, are more satisfactory than the best representations of them.

That this spirited undertaking may not fail for want of due support, it is recommended to all collectors and preservers of dried specimens; and we hope they will buy it, get it bound and place it on their shelves. It will be almost, if not altogether, a complete British Herbarium; and we should advise the editors to make arrangements for supplying the British forms or species which are not to be seen in the north of Germany.

BOTANICAL NOTES, NOTICES, AND QUERIES.

ANSWERS TO CORRESPONDENTS, NOTES, REMARKS, ETC.

Our new correspondent John Peers, whose communication has been in hand some considerable time, is requested to accept the Editor's thanks for his marked list of British species, and he is hereby assured that the young Society of Warrington Naturalists has our sympathy and warmest wishes for its success. The rules of the new association have been mislaid; if our friend the honorary secretary will send another copy, it will be duly honoured in the pages of the 'Phytologist.'

The readers of the sole serial in which the progress of botany is regularly reported, will appreciate a list of Warrington plants compiled by a number of local botanists who co-operate in the undertaking.

Our amiable friend "H. C.," now residing and botanizing in Ross-shire, is informed that a series of Scotch Roses will be very acceptable. The varieties of *Rosa villosa* are quite as numerous as the forms of *R. canina*, and in intensity of colour, largeness of bloom, etc., they far surpass the common Dog-rose.

Astragalus hypoglottis is not uncommon on limestone, in Scotland; and the lobed-leafed form of *Cochlearia*, *C. danica*, is perhaps one of the commonest varieties of this variable species.

"W. G. F. P.," of St. Peter's College, Westminster, is doubtless aware that *Asplenium lanceolatum* is a rare British Fern, and also that Oxfordshire is an unrecorded locality for this species. It has occurred sparingly in Sussex, and it is not uncommon near Bristol (see below).

Lastrea Filix-mas, var. *pumila*, is not an unusual alpine form, and, according to W. G. F. P.'s experience, it is not confined to alpine situations.

Our estimable friend John Lloyd is entitled to our heartiest thanks for his offer of a list of the defunct and recently observed plants of Wandsworth Common. The notes of a resident botanist on the changes of locality, the disappearances and reappearances of plants in this well-known tract, will be very acceptable to our numerous readers.

Last month, July, 1862, we observed that *Epilobium angustifolium*, the French Willow-herb, was well established on the Balham end of Wandsworth Common, and on the Clapham side of the railway. *Note.* Has any of our Wimbledon or Wandsworth correspondents recently seen *Hottonia palustris* near Lower Tooting?

Our excellent Preston friend, who so kindly supplies us with "Rambles by the Ribble," is hereby informed that his lively graphic notes on antiquarian, legendary, and botanical subjects are not unread, although sometimes not reproduced here. The botany in No. 14 is so small that we have not been able to see it, not even when our spectacles graced the prominent feature of our face. We have heard this part of the facial organization called the "handle of the face." To this nomenclature there is a decided objection, viz. that *waxen noses* only can be safely handled in an unceremonious or irreverent manner. Descriptions of charming scenery, old halls, homesteads, ancient inscriptions, heirlooms, drinking-horns, etc., are very delightful. Many a time, during our annual peregrinations in July and August, we would not have needed two biddings to elevate the horn of Gisburn Hall, even had the contents been pure water, but suppose the horn charged with claret, our potations would have been long and deep; due honour to the hospitalities of the hall would have been duly paid.

The seeds of the presumed *Primula elatior* have been entrusted to a better situation than the Editor's little plot of garden in Chelsea can afford. In the 'Flora of Essex,' just published, *P. elatior* is reported as growing in most of the woods around Walden, with *P. vulgaris* and its variety *caulescens;* also about Bardfield, in meadows, accompanied with *P. veris*, and without *P. vulgaris*. I have the genuine plant from Northumberland.

The seeds of *Centaurea pratensis*, Brebisson, 'Flore de Normandie,' are also committed to the same safe custody. Mr. Atwood, in his letter, informs me that the meadows at Satteville are full of this Knapweed, *Tragopogon orientalis*, and *Crepis biennis*. Our correspondent further states that he sees no difference between this continental form of *Centaurea* and one equally common in the vale of Gloucester; from the seeds of the latter, he (Mr. A.) says he produced in Kent the common form of *C. nigra*.

Will our Cheltenham correspondents be so obliging as to look after this Gloucestershire variety and send a report? Some of Mr. Atwood's remarks on this subject and on varieties of *Verbascum* will appear in another place.

To our obliging correspondents of Egham and Richmond, Surrey, our special and hearty thanks are hereby tendered for their proffered kind assistance in completing the flora of the metropolitan counties. We rely on local botanists for accurate lists of the vegetation of the remoter parts of the counties of Surrey and Middlesex.

Adiantum Capillus-Veneris in Surrey.—Only a few days ago (Aug. 1st), intelligence reached us of the discovery of the true Maidenhair Fern, at Lingfield, in Surrey, on the very verge of the county, adjoining on the east to Kent, and on the south to Sussex. We are well aware that this will be by many botanists and pteridologists scouted as one of the grossest of mares' nests; but as there are several vouchers for the fact, it is confidently given to our readers as genuine.

Several years ago,—more than twenty, probably nearer thirty,—a young botanist told us he had seen *A. Capillus-Veneris* on or about West Hoathly rocks, but, as he had no specimen and subsequently admitted that he had probably mistaken something else for this variety, we did not take any further notice of the communication. The gentlemen through whom the present information came are unimpeachable both for competence and veracity. A few lobes of the frond were sent with the notice of the discovery.

It is also deserving of notice that this is the same part of the country as that from which this Fern was previously as above reported; for Lingfield is in the Weald, and West Hoathly is in the forest on the Wealden border. The latter is in another county, but Ferns and other plants overleap political boundaries.

Our readers are likely to hear more about this inland station for what is a maritime plant here but not on the continent; and it promises to be a subject of discussion as long and keen as that about *Blechnum alpinum*. The latter fact has not yet been satisfactorily settled, except thus far, that *B. alpinum* was found in Scotland, and that there was but one plant in the Breadalbane locality, and that it would now be in vain to go there to look for it, because the single plant then and there discovered was taken away. One of our excellent correspondents, Mr. E. E., of Wheathamstead, has mystified the subject still more, for he sent a frond of the same from a fair collector and cultivator of Ferns, one of his neighbours, who assured him that she collected the Fern in the Lake district, and that there it was plentiful. Our informant says nothing about the plentifulness of the Maidenhair Fern in Lingfield parish, nor that he found but one plant, and took that away. We understand and believe that the plant is there still, and we hope it will long flourish and increase for the satisfaction of the curious, and for the conviction of the *sceptical*. Any of our friends may have the address of the gentleman who made the discovery, by private application. Lingfield is not so far from London as Killin; and there is more prospect of finding *Adiantum* in Surrey than *Blechnum alpinum* in the Highlands of Scotland.

Gentiana cruciata. (See 'Phytologist,' vol. vi. N. S.)—*G. cruciata* is said by Gerard, p. 434, to have been found by him "in a pasture at the west end of Little Rayne, on the north side of the way leading from Braintree to Much Dunmow, and in the horseway by the same close." This has never been confirmed. ('Flora of Essex,' p. 205.)

The Editor is obliged to "H. T.," of No. 1, Clarendon Villas, Southsea, Hants, for telling him that *Lathyrus Nissolia* and *Fritillaria Meleagris* should appear under another standard, protected or ushered in beneath another flag. *Suum cuique tribuatur* is a good axiom; "let him who blows the loudest or best blast bear away the horn." The readers are humbly requested to move the two beauties aforenamed from the responsibility of "E. B. P.," and put them under the charge and guardianship of "H. T.," The benevolent reader is also requested to put an L, *i. e.* small capital, into the name of the place under which the Fritillary and the Grasspoly should not have appeared. The same kind personage is requested to change the heading of pp. 226 and 227 from western into eastern; or to take away the WE and put EA in their place.

The Editor is much indebted to "W. G. F. P.," of The Coppice, Henley-on-Thames, who has sent two small fronds of *Asplenium lanceolatum*, found on the wall of a cottage garden near Henley. This discovery is not quite so striking as that of *Adiantum Cap.-Ven.* at Lingfield, but it is a new and hitherto unknown locality for this rare species.

To our excellent friend of Ross, "B. M. W.," we send our hearty thanks for a fresh specimen of *Sparganium minimum*, and especially for his kind promise of some more Dean Forest plants and localities, etc.

Mr. A., of Preston, will have received a private communication ere he see this.

To Mr. W. P., of 45, Frith street, Soho, and to John Jones, of Llanderfel, our kind acknowledgments are hereby tendered for communicating a locality for *Geranium sylvaticum* in North Wales, and for an account of unusual-coloured Foxgloves.

Mr. J. S., of Perth, has sent a box of living plants, viz. *Geranium pyrenaicum*, *Malva moschata* (white var.), *Cynoglossum sylvaticum*, *Circæa alpina*, *Campanula rapunculoides*, *Doronicum Pardalianches*, etc. etc. Mr. S. will receive a direct communication before long.

Our hearty thanks are tendered to Dr. Macalister for his notes on South Highland botany. The article will appear in October or November.

Our excellent friend and correspondent T. R. A. Briggs, is requested to accept our acknowledgments for the rare plants he promises, and we hope to have a parcel ready for him before *Yule-even*.

If Dr. Windsor observed anything worth recording in his late botanical excursion to North Lancashire, he will greatly oblige us by sending it for publication.

Enteromorpha Hopkirkii.—"In last month of the 'Phytologist,' a correspondent remarks, 'the *Enteromorpha Hopkirkii* is a British Alga.' I should feel obliged if yourself or your correspondent could inform me after whom this seaweed received its specific name, and any other information you may be able to afford respecting the person after whom it is named. . . . I am in anticipation of receiving a small parcel of South African Mosses, in exchange for English ones; and, if any of your correspondents care to have any of these specimens, I shall be glad to send some in exchange for English ones (when they arrive, which may be in a month or two). In the meantime, any English ones which might be entrusted to my care could be forwarded by next outward mail along with my own parcel.—CHAS. C. P. HOBKIRK."

Our kind Brighton correspondent is entreated to help our Huddersfield friend.

Our fair correspondents at Enfield (it is to be hoped and wished) have received a private communication ere this can reach Chace Cottage.

Our Australian relative and correspondent, D. Irvine, will receive a private notice.

F. Walker, of Arnos-Grove, Southgate, is hereby informed that his catalogue and note have been duly received. We can supply several of the specimens wanted, to complete his herbarium of the British species.

To the same gentleman our thanks are due for his note on the Oak-leaved Honeysuckle; it will appear soon.

A NEW EPILOBIUM?

I enclose a specimen and send the description of an *Epilobium* which grows in the neighbourhood of Plymouth, and which, although it bears a closer resemblance to *Epilobium montanum* than to any other species of the genus with which I am acquainted is, I think, quite distinct from it, and may prove to be the *E. lanceolatum* of the 'British Flora' and Babington's Manual. It has the stem round, often branched, downy; leaves all stalked, lanceolate, irregularly and not very deeply toothed, entire near the base, glabrous, often pendulous; buds nodding, sepals acute, petals pink or nearly white, never purple, stigma four-cleft; root long, sometimes tapering, scions small or absent. The above description was drawn up after an examination of several plants. It grows at Lipson, about a mile from Plymouth, also between Lipson and Crabtree, in waste ground at the latter place, and at Colwell, near the river Plym. At three of these stations I also noticed plants of *Epilobium montanum*.

If any reader of the 'Phytologist' would send me a specimen of *Epilobium lanceolatum*, in order that I may compare it with my plant, I should feel obliged, and would send him in return a specimen from one of the stations I have named. T. R. ARCHER BRIGGS.

LOCALITIES OF SOME RARE PLANTS.

Borago officinalis, var. with white flowers: Capstan Hill, Ilfracombe, Devon, just above the sea. *Lavatera arborea:* same place. *Fœniculum vulgare:* on Lantern Hill, Ilfracombe, the south side; abundant. *Geranium striatum:* beneath a hedge, leading from the pier at Clovelly, North Devon, to the entrance to Clovelly Court; about three plants found. *Andromeda polifolia:* in the Peat Bog, at Shapwick, Somersetshire; very abundant. *Epilobium angustifolium:* along the canal bank, near Shapwick, Somersetshire, for a considerable distance on both sides; also in a retired part of the wood of Holmwood, near Dorking, Surrey, on the top of the hill. *Linaria Pelisseriana?* (upright purple Toadflax): on an old wall, at Petersham, Surrey. J. W. CHAPMAN.

INSECT RAVAGES.

The Ash-trees in this neighbourhood have for a long time presented a very sickly appearance, being covered with scars instead of leaves; the foliage diminishing year by year. Many trees, which, within the last twelve years, were in a flourishing condition, have now scarcely leaves enough to keep them alive, and, in a few summers more, must inevitably perish. The cause of all the mischief is a small brown grub, which, as soon as the shoot makes its appearance, eats its way through the young green bark, and devours the tender inside. The whole shoot then withers and falls off, leaving nothing but an unsightly scar upon the branch. Many fine trees are denuded of all save the leading shoots, and these will no doubt disappear. The attacks of this puny ravager threaten a gradual but certain extinction of the Ash, which has hitherto been considered the glory of Craven. G. R. B.

June, 1862.

LATHYRUS TUBEROSUS.

(See 'Phytologist,' vol. vi. p. 190.) Is not this confounded with *Orobus tuberosus* in regard to the English habitat given? On the Continent it is an inhabitant of cornfields, *O. tub.* of woods. An allied species of the south of Russia, *Lathyrus rotundifolius*, Bieb., is known in gardens.

Odoriferous Plants.

(See 'Phytologist,' vol. vi. p. 189.) Some of the foreign *Violæ* are sweet, but without the peculiar fragrance of our violet. Several sp. of the Mint family seem to have different odours in different localities. The common Primrose, so deliciously fragrant in England, is scentless in Italy and Germany. *Oxalis cernua*, fragrant in Italian gardens, is without perfume here.

Cyclamen hederæfolium, *Clusii.*

(See 'Phytologist,' vol. vi. p. 189.) This, the true *C. hederæfolium*, is a Southern, spring species, with deep-pink, long-segmented, fragrant flowers, scarcely to be found native north of the mountains of Spoleto in the Apennines (where many other Southern plants cease to appear), and tender in England. The supposed English species (autumnal) is not the *europæum* of the Alps. A summer species, rather slow of cultivation.

Finding that you are preparing a New London Flora, and are desirous of procuring local information from the districts around London, I have put down a few plants which I have met with at various times. I may mention that *Anemone apennina* was flourishing in its old position in Wimbledon Park, in April last.—1. *Linaria repens:* Streatley, Berks. 2. *L. purpurea:* old wall, at Petersham, Surrey. 3. *L. Cymbalaria:* plentiful on old walls at Richmond. 4. *Scutellaria galericulata:* Richmond, Surrey side of river. 5. *Cynoglossum officinale:* Richmond Park. 6. *Chlora perfoliata:* railway-cutting near Weybridge. 7. *Antirrhinum Orontium:* fields near Croydon. 8. *Epilobium angustifolium:* Holmwood, Dorking, in a thick shady part of the wood; also railway-cutting near Weybridge, observed for the first time last Monday, July 28th. 9. *Thalictrum flavum*: river-side near Petersham. 10. *Aquilegia vulgaris:* top of Bluebell Hill, near Aylesford, Kent. 11. *Phyteuma orbiculare:* Denbies Park, Dorking. 12. *Melilotus officinalis:* railway-cutting close to the Anerley station on Croydon railway. 13. *M. vulgaris:* top of Park Hill, Croydon.

I am very desirous to find the localities where the *Anemone ranunculoides* and *Teucrium Botrys* grow. The former is said to grow near King's Langley, Herts, and Wrotham, Kent; the latter, on or near Box Hill, Surrey. If you could give me any information respecting these two plants, I should be much obliged. Sir W. Hooker was not aware of any one finding the *Anemone* in the localities named. J. W. C.

Communications have been received from

John Sim; Sidney Beisly; H. Beisly; W. Pamplin; Hampden G. Glasspoole; J. W. Chapman; John Peers; C. J. Ashfield; H. C.; F. Walker; H. Trimen; Walter Galt; B. M. Watkins; M. A. Walker; Dr. Windsor; M. F. Crepin; T. R. A. Briggs.

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